



Republic of Maldives

**TERMS OF REFERENCE
FOR
CONSULTANCY SERVICES**

to

**Develop an air quality monitoring toolkit
for local communities**

Issued by:

Ministry of Environment, Climate Change and Technology
Green Building, Handhuvaree Hingun, Maafannu, Male' -20392
Republic of Maldives

TERMS OF REFERENCE

BACKGROUND

In 2019, the National Action Plan on Air Pollutants identified an absence of local advocacy groups with a specific interest in air quality. This may be linked to a lack of public interest, which may be influenced by lack of awareness on the linkages of air pollution and human health. To try and effectively address the cross cutting issue of air quality management, the Strategic Action Plan 2019-2023 prioritizes strengthening the collection of air quality data in the country.

Meanwhile, citizen science has also emerged as a promising option to tackle challenges in the fields of conservation, natural resource management, and environmental protection. Monitoring is a single aspect of air quality management; and while the Maldives does not conduct routine monitoring of local air quality, it has been active in shepherding international action for climate change, itself committing to and taking action that has positive impacts for both climate mitigation, adaptation and air quality.

Citizen science in air quality monitoring can increase the potential for acquiring new knowledge while assessing the extent of local pollution, generating valuable data, initiating preventative actions, and promoting ecotourism.

However, the design of an air pollution monitoring network should not be undertaken without consideration and resolution of several factors. Extensive planning needs to be done before requirements are firmly established and translated into hardware specifications.

OBJECTIVES

The objective of this project is to guide Maldivian communities, schools, civil societies, or individuals with the necessary information required to launch a replicable public air quality monitoring program, customized for local conditions.

In this regard, the Ministry of Environment, Climate Change and Technology is seeking a national and/or international consultant(s) or a firm to develop a comprehensive toolkit containing information material which provides the user with the knowledge on how to appropriately select, use, and maintain “low-cost” sensors and to correctly interpret sensor data.

This will help identify strengths and weaknesses of utilizing low-cost air sensors in communicating air quality matters to impacted communities and develop more refined sensor deployment strategies that would help ensure the successful engagement of communities in future deployment projects.

It will allow individuals to become more familiar with specific air quality issues affecting their communities and will empower them with the knowledge and experience they need to take action to avoid air pollution exposure, using “low-cost” portable air pollution sensors.

Results from this study will also help governmental organizations and other policy makers to better understand air quality issues at the community level and to make better policy decisions to protect the public from the impacts of air pollution.

SCOPE AND DELIVERABLES

(1) Develop a toolkit containing informational material about sensors and best practices for data collection, monitoring and interpretation. The toolkit will promote appropriate use of air quality sensors and help communities use sensors to answer questions about air quality.

(2) Conduct testing in the Maldives to characterize the performance of commercially and readily available “low-cost” sensors and to identify candidates for field deployment for the target audience.

During the development of the toolkit, the consultant should examine the options to determine which methods are most appropriate locally, taking into account the main uses of the data, initial investment costs for equipment, operating costs, reliability of systems, and ease of operation.

	Deliverable	Scope	% of payment	Duration
<u>1</u>	Outline of work	Initial stakeholder meeting with MECCT and propose a detailed methodology and outline for the monitoring toolkit	20%	3 weeks
<i>MECCT approval period</i>				1 week
<u>2</u>	Draft documents	a comprehensive toolkit containing information material which provides the user with the knowledge on how to appropriately select, use, and maintain “low-cost” sensors and to correctly interpret sensor data. Report on tests conducted in the Maldives to characterize the performance of readily available “low-cost” sensors and to identify candidates.	40%	8 weeks
<i>MECCT approval period</i>				1 week
<u>3</u>	Final materials	Final toolkit in English, summarized factsheet in Dhivehi.	40%	6 weeks
<i>MECCT approval period</i>				1 week

PAYMENT SCHEDULE

The payment will be released as follows

- a) 20% on timely submission and approval of the **Outline of work**
- b) 40% on timely submission and approval of the **Draft documents**
- c) 40% on timely submission and approval of the **Final materials**

CHECK-LIST OF DOCUMENTS TO SUBMIT

The bidder must submit all the documents listed in the checklist in order to proceed to the technical evaluation.

- ID card copies (or passport copies if international) of all individuals on the team
- Financial proposal with a validity of 90 days (proposed fee must include any travel expenses associated with the assignment and the consultancy fees)
- CVs of all individuals and/or company profile if a firm is applying.
- If more than one party wishes to show interest, Joint Venture agreement or Letter of Association describing the Agreement between the parties needs to be provided together with JV form in Appendix 1 of the ToR
- Copies of higher degree certificate and/or transcripts/list of course modules of relevant degree
- Letters of experience

QUALIFICATIONS AND EXPERIENCE

Kindly take note of the documents evaluated for each criteria. Documents not listed in the table below will not be evaluated.

	Criteria and scale		Weightage (points)	Max points	Documents evaluated
1.Relevant academic qualification	1	Minimum Bachelor's degree or an equivalent qualification in a scope-relevant field	25	30	based on relevancy of copies of the higher degree certificate and transcript
		Master's degree or an equivalent qualification in a scope-relevant field	30		
2.Relevant experience	2.1	Demonstrated professional or practical experience in monitoring air quality	40 (10 pts for each)	40	based on letters of experience and/or details of course modules in the transcript, or
		No demonstrated	0		

		professional or educational practical exposure			research paper etc.
	2.2	Demonstrated work experience in air quality management	30 (10 pts for each)	30	based on letters of reference/experience and/or details of course modules in the transcript, or research paper etc.
		No demonstrated work experience in air quality management	0		
Total		<i>(Minimum technical score required to pass: 65/100)</i>		100	

Applicants achieving the highest combined weighted technical and financial score shall be selected

$S_f = 100 \times F_m/F$, in which

S_f denotes the financial score of the proposal under consideration;

F_m is the price of the lowest price proposal;

F denotes the price of the proposal under consideration.

Proposals will be ranked according to their combined technical (S_t) and financial (S_f) scores using the weights

$T\%$ = the weight given to the Technical Proposal (60%)

$P\%$ = the weight given to the Financial Proposal; (40%)

$S = T\% + P\%$,

Where S denotes the total combined weighted technical and financial scores

SCHEDULE FOR THE ASSIGNMENT

Duration of the assignment is 20 weeks from the commencement of the works.

Duty Station:

Home-based with site visits as necessary.

Appendix 1

JV form (Applicable to bidders submitting proposal as a Joint venture)

1. Bidder's Legal Name:	
2. JV's Party legal name:	
3. JV's Party Country of Registration:	
4. JV's Party Year of Registration:	
5. JV's Party Legal Address in Country of Registration:	
6. JV's Party Authorized Representative Information	
Name:	
Address:	
Telephone/Fax numbers:	
Email Address:	
7. Attached are copies of original documents of: <i>{check the box(es) of the attached original documents}</i> <input type="checkbox"/> JV Agreement (And or) <input type="checkbox"/> letter of Association between the parties in the JV	